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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,889	10/02/2001	Akio Tosaka	1307-01	8803

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IP GROUP OF DLA PIPER RUDNICK GRAY CARY US LLP  
1650 MARKET ST  
SUITE 4900  
PHILADELPHIA, PA 19103

EXAMINER

IP, SIKYIN

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/937,889

Applicant(s)

TOSAKA ET AL.

Examiner

Sikyin Ip

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 4/6/05;5/09/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5,10,12,14 and 15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,10,12,14 and 15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### Claim Rejections - 35 USC § 103

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-5, 10, 12, and 14-15 are rejected under 35 U.S.C. § 103 as being unpatentable over USP 4790889 to Maid et al in view of USP 5074929 to Tosaka et al. (Both are references of record).

Maid disclose(s) the features including the claimed steel alloy composition (col. 2, lines 35-58 and col. 3, lines 23-25), ferrite phase to martensite phase ratio (col. 1, lines 9-16 and col. 3, lines 31-36), tensile strength (col. 4, lines 24-34), hot-rolled product thickness (col. 4, lines 40-42 and Table 2, col. "d") with improved uniform cold workability (col. 4, lines 16-23), and baking (col. 4, lines 24-29). The difference

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between the reference(s) and the claims are as follows: with respect to claims 1-2 and 10, Maid does not disclose the claimed N/Al ratio and the amount of dissolved N in steel, ferrite grain size. With respect to claim 12, Maid does not disclose Nb. With respect to claims 14-15, Maid does not disclose electroplating or hot-dip plating a steel sheet. But, it is well settled that there is no invention in the discovery of a general formula if it covers a composition described in the prior art, *In re Cooper and Foley* 1943 C.D. 357, 553 O.G. 177; 57 USPQ 117, *Taklatwalla v. Marburg*, 620 O.G. 685, 1949 C.D. 77, and *In re Pilling*, 403 O.G. 513, 44 F(2) 878, 1931 C.D. 75. In the absence of evidence to the contrary, the selection of the proportions of elements would appear to require no more than routine investigation by those ordinary skilled in the art. *In re Austin, et al.*, 149 USPQ 685, 688.

With respect to the dissolved N content, which would have been inherently possessed by alloy steel of Maid since the claimed N content and other alloying elements' contents are overlapped. Therefore, it would have been obvious to one of ordinary skill in the art to select any portion of range, including the claimed range, from the broader range disclosed in a prior art reference because the prior art reference finds that the prior art composition in the entire disclosed range has a suitable utility. Also see MPEP § 2131.03 and § 2123.

Tosaka in col. 2, lines 37-62 disclose stretch flanging property of alloy steel composition similar to Maid, made by hot rolling, cold rolling, hot-dip galvanized (col.2, lines 10-61), can be improved with fine grain ferrite having grain size less than 20  $\mu\text{m}$  in the same field of endeavor or the analogous metallurgical art. Therefore, it would have

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been obvious to one having ordinary skill in the art of the cited references at the time the invention was made to hot-dip galvanizing and refine ferrite grain size of steel of Maid as taught by Tosaka in order to improve/provide the corrosion and stretch-flanging properties (See Tosaka, col. 2, lines 37-61). In re Venner, 120 USPQ 193 (CCPA 1958), In re LaVerne, et al., 108 USPQ 335, and In re Aller, et al., 105 USPQ 233. Tosaka further discloses addition of Nb would improve steel alloy strength and ductility such as stretch flanging property. The precipitated Nb carbonitride would improve recrystallized ferrite structure (see col. 3, lines 51-66). It has been held that combining known ingredient having known functions, to provide a composition having the additive effect of each of the known functions is within realm of performance of ordinary skill artisan. In re Castner, 186 USPQ 213 (217). The use of conventional materials to perform their known functions in a conventional process is obvious. In re Raner, 134 USPQ 343 (CCPA 1962). Tosaka does not disclose the Nb carbonitride precipitate size, but the size would have been in the instant claimed range to improve strength and ductility of the rolled steel.

### ***Response to Arguments***

Applicant's arguments filed April 6, 2005 have been fully considered but they are not persuasive.

Applicants argue that Maid fails to teach Al content less than 0.02 wt.%. But, less than 0.02 wt.% is no different from 0.02 wt.%. Moreover, it is well settled that a prima facie case of obviousness would exist where the claimed ranges and prior art do

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not overlap but are close enough that one ordinary skilled in the art would have expected them to have the same properties, *In re Titanium Metals Corporation of America v. Banner*, 227 USPQ 773 (Fed. Cir. 1985), *In re Woodruff*, 16 USPQ 2d 1934, *In re Hoch*, 428 F.2d 1341, 166 USPQ 406 (CCPA 1970), and *In re Payne* 606 F.2d 303, 203 USPQ 245 (CCPA 1979). To overcome the prima facie case, an applicant must show that there are substantial, actual differences between the properties of the claimed compound and the prior art compound. *Hoch*, 428 F.2d 1343-44, 166 USPQ 406 at 409.

Applicants' argument as set forth in pages 2-4 of instant remarks is noted. But, applicants' attention is directed to *Maid*, col. 1, lines 9-56 which discloses that hot rolled steel can be processed by steps similar to *Tosaka*. Moreover, the instant claimed hot-rolled steel sheet does not exclude cold working step and any other additional steps from cited references. *Maid* in col. 4, lines 1-34 discloses the hot worked steel has "good uniform cold workability", which is indication of hot rolled steel would further be cold worked.

Applicants' argument as set forth in page 5, second full paragraph of instant remarks is noted. But, claimed microstructure of instant steel, 70% or more ferrite phase and 5% or more martensite (instant claim 10), is anticipated by *Maid* (80%< ferrite and balance martensite; col. 3, lines 30-35 and claim 7).

Applicants' argument from bottom paragraph to page 7 of instant remarks is noted. Assuming *arguendo* that the claimed five conditions listed at the bottom of page 5 of instant remarks are critical for delta TS. But, they are found inconsistent with

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Figure 1 that are submitted by applicants. Figure 1 shows at least 10% not 0.001% dissolved N is required to have delta TS 40 or more. Figure 3 shows claimed average crystal grain size is not critical.

Applicants' statement with respect to N/Al ratio, average crystal grain size, and dissolved N content are noted. But, unexpected results must be established by factual evidence. Comparison must be done under identical condition except for the novel features of the invention. In re Brown, 173 USPQ 685 and In re Chapman, 148 USPQ 711. The showing of unexpected results must be occurred over the entire claimed range. In re Clemens, 622 F.2d 1029, 206 USPQ 289, 296 (CCPA 1980). The scope of the showing must be commensurate with the scope of the claims. MPEP § 716.02(d), In re Tiffin, 448 F.2d 791, 792 (Fed. Cir. 1971), In re Coleman, 205 USPQ 1172, In re Grasselli, 713 F.2d 731, 743, 218 USPQ 769, 778 (Fed. Cir. 1983), and In re Greenfield, 197 USPQ 227. General superiority cannot be inferred from the results obtained using a single embodiment of the claimed invention, In re Greenfield, 197 USPQ 227, 230 and MPEP 2144.08 (B).

## Conclusion

Applicant is reminded that when amendment and/or revision is required, applicant should therefore specifically point out the support for any amendments made to the disclosure. See 37 C.F.R. § 1.121.

## Examiner Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Ip whose telephone number is (571) 272-1241. The examiner can normally be reached on Monday to Friday from 5:30 A.M. to 2:00 P.M.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Roy V. King, can be reached on (571)-272-1244.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



SIKYIN IP  
PRIMARY EXAMINER  
ART UNIT 1742

S. Ip  
July 24, 2005